

In the Claims

Claim 1 (previously presented): A method of forming a semiconductor construction, comprising:

forming a first substrate comprising semiconductor-material-containing structures separated from one another by an insulative material; the semiconductor-material-containing structures defining an upper surface;

forming a second semiconductor substrate comprising a monocrystalline material having a damage region therein;

bonding the second semiconductor substrate to the semiconductor-material-containing structures at the upper surface; and

cleaving the monocrystalline material along the damage region.

Claim 2 (previously presented): The method of claim 1 wherein the cleaving leaves a rough upper surface of the monocrystalline material over the semiconductor-material-containing structures; and further comprising, after the cleaving, smoothing the upper surface of the monocrystalline material.

Claim 3 (previously presented): The method of claim 1 wherein the semiconductor-material-containing structures are conductively-doped.

Claims 4-10 (cancelled).

Claim 11 (previously presented): A method of forming a semiconductor construction, comprising:

forming a first semiconductor substrate comprising a first monocrystalline base and semiconductor-material-containing structures above the base, at least some of the semiconductor-material-containing structures being separated from one another by an insulative material; the semiconductor-material-containing structures and insulative material together defining a planarized upper surface above the first monocrystalline base;

forming a second semiconductor substrate comprising a second monocrystalline base and having a damage region formed within the second monocrystalline base;

bonding the second semiconductor substrate to the semiconductor-material-containing structures at the planarized upper surface above the first monocrystalline base; and

cleaving the second monocrystalline base along the damage region.

Claim 12 (original): The method of claim 11 the first and second monocrystalline bases comprise monocrystalline silicon.

Claim 13 (currently amended): The method of claim 11 wherein some of the semiconductor-material-containing structures have no function except to bond to the second semiconductor substrate; and wherein others of the semiconductor-material-containing structures have additional functions besides bonding to the second semiconductor substrate.

Claim 14 (previously presented): The method of claim 11 wherein the second monocrystalline base is bonded to the semiconductor-material-containing structures.

Claim 15 (previously presented): The method of claim 11 wherein the bonding the second semiconductor structure comprises bonding the second monocrystalline base to the semiconductor-material-containing structures, and bonding the second monocrystalline base to the insulative material at the planarized upper surface above the first monocrystalline base.

Claim 16 (original): The method of claim 11 wherein the damage region is formed by implanting hydrogen ions into the second monocrystalline base.

Claim 17 (original): The method of claim 11 wherein the damage region is formed by implanting hydrogen ions into the second monocrystalline base, and wherein the cleaving comprise thermally treating the second monocrystalline base.

Claim 18 (original): The method of claim 11 wherein the only temperatures utilized for the bonding are less than or equal to about 700°C, and further comprising not exposing the first monocrystalline base to temperatures exceeding 700°C after the bonding.

Claim 19 (previously presented): The method of claim 11 further comprising forming at least one doped semiconductor region extending through the second monocrystalline base and electrically contacting at least one of the semiconductor-material-containing structures.

Claim 20 (previously presented): The method of claim 11 further comprising:
forming at least one doped semiconductor region extending through the second monocrystalline base and electrically contacting at least one of the semiconductor-material-containing structures; and

forming at least one other doped semiconductor region within the second monocrystalline base, but which does not extend entirely through the second monocrystalline base.

Claims 21-49 (cancelled).